

Case 3434

***Scleropauropus* Silvestri, 1902 (Myriapoda, Pauropoda): proposed conservation of usage by replacement of the holotype of the type species *Scleropauropus hastifer* Silvestri, 1902 with a neotype, and replacement of the holotype of *Scleropauropus lyrifer* Remy 1936 by designation of a neotype**

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Abstract. The purpose of this application, under Article 75.5 of the Code, is to conserve the usage of the name *Scleropauropus* Silvestri, 1902 for a group of pauropods (Myriapoda, Pauropoda) while also conserving as its type species the nominal species *S. hastifer* Silvestri, 1902, by replacing with the same neotype the unsuitable holotypes of both *S. hastifer* Silvestri, 1902 (type species by monotypy), and *S. lyrifer* Remy, 1936 (consistently, but erroneously treated as the type species of *Scleropauropus* since Remy (1957)).

Keywords. Nomenclature; taxonomy; Myriapoda; Pauropoda; *Scleropauropus*; *Scleropauropus hastifer*; *Scleropauropus lyrifer*; pauropods; Europe.

1. In his monographic account of Italian Pauropoda within Berlese's monumental study, '*Acari, Myriapoda et Scorpiones hucusque in Italia reperta*', Silvestri (1902, p. 66) described the genus *Scleropauropus* to accommodate the new species *S. hastifer* Silvestri, 1902 (p. 66, pl. 13), which is the type species by monotypy.

2. The genus has been universally accepted as valid, e.g. in the classic monographs of Verhoeff (1934) and Bagnall (1935), and another 30 species have been subsequently added to it. In its current imprecise circumscription, the genus is distributed worldwide. However, it has been recently shown (Scheller, 2007) that *Scleropauropus* is a heterogeneous mixture of species and, in a first effort to reduce it to a more natural assemblage, 17 species have been transferred to other genera.

3. This overdue but still unfinished redistribution of the nominal taxa originally described in *Scleropauropus* requires an unambiguous characterization of the type species. Unfortunately, the original description of *Scleropauropus hastifer* does not satisfy the requirements of modern pauropod taxonomy, which is based on subtle morphological characters only partially recorded in pauropod descriptions in Silvestri's times. This has been already noted by the first modern specialist of pauropods, P.A. Remy, who introduced two new subgenera within this genus, in a

paper where he still accepted Silvestri's species as the type species of *Scleropauropus* (Remy, 1942). Remy (1957) subsequently suggested that *Scleropauropus lyrifer* Remy, 1936 (p. 316) be fixed as the type species of this genus.

4. Remy's action was invalid because of the previous type species fixation of *S. hastifer* (see para. 1) by monotypy.

5. Silvestri's original type of *S. hastifer*, collected at Marino on the hills near Rome (Italy), is still preserved in that part of Silvestri's collection housed at Dipartimento di Entomologia e Zoologia Agraria at the University of Portici, Napoli (Italy). This type specimen has been recently examined by the senior author of this application. The specimen mounted on a slide and labelled 'Scleropauropus hastifer. Typus', is in very bad condition; the few characters still identifiable, as the position of a few tergal setae, are not enough for a satisfactory identification and redescription.

6. Due to the manipulations in preparing the original slides and the subsequent poor conservation, there is no chance to recover DNA samples from the two holotypes for mutual comparison or for comparison with fresh material. Nor is there any reasonable chance ever to check whether the two nominal taxa would eventually deserve synonymization. This has never been proposed, Silvestri's species having simply been cited as a nomen dubium. A way to stabilize taxonomic usage, while at the same time preserving Silvestri's original fixation of the type species, would be to set aside Silvestri's holotype of *S. hastifer* and to replace it with the holotype of *S. lyrifer* from Germany, Baden, Hausach, thus making the two nominal taxa objective synonyms. However, the holotype of *S. lyrifer* is, in turn, very poorly preserved and thus taxonomically uninformative. Therefore, Remy's nominal taxon would also require fixation of a neotype after setting aside the original holotype fixation. Topotypical material is not available and the likely occurrence in the proximity of the type localities of many pauropod species to which the original descriptions may apply suggest adopting a different solution to the problem of fixing the identity of the type species of *Scleropauropus*. A specimen preserved in the collections of the Muséum National d'Histoire Naturelle, Paris, together with the holotype of *S. lyrifer* Remy, 1936, can provide a solution. This specimen, labelled 'Scleropauropus lyrifer Remy ad. Montgaillard près Périgueux. Été 1946. F. Grandjean' was identified as *S. lyrifer* by Remy himself. We suggest, thus, that this specimen be fixed as the neotype for both nominal species, *Scleropauropus hastifer* Silvestri, 1902 and *S. lyrifer* Remy, 1936. Using this approach, Silvestri's nominal species will be preserved as the type species of the genus, while the latter's taxonomic meaning remains fixed around Remy's nominal species, according to usage. It is proposed that the existing but uninformative holotypes of *Scleropauropus hastifer* Silvestri, 1902 and *Scleropauropus lyrifer* Remy, 1936 be set aside and the specimen from France: Montgaillard près Périgueux specified above be designated as neotype of both species. No specimens of *Scleropauropus* have been collected in Italy after Silvestri's collecting of *Scleropauropus hastifer* near Rome more than a century ago. Although Silvestri (1902) recorded only one species from the type locality of *Scleropauropus hastifer*, it is very likely that there are some tens of pauropod species around Rome (the pauropod fauna of Italy is still largely unexamined).

7. It is important to clarify the concept of the genus *Scleropauropus* by establishing identity of its type species because of the need to distinguish it from several pauropod

genera (*Allopaupopus*, *Decapauropus*, *Juxtapauropus*, *Pauropus*, *Cauvetauropus* and *Nesopauropus*) that may occur together in the same place.

8. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside the holotypes of *Scleropauropus hastifer* Silvestri, 1902 and *Scleropauropus lyrifer* Remy, 1936 and to designate as neotype of both species the specimen at the Muséum National d'Histoire Naturelle, Paris, labelled 'Scleropauropus lyrifer Remy ad. Montgaillard près Périgueux. Été 1946. F. Grandjean';
- (2) to place on the Official List of Generic Names in Zoology the name *Scleropauropus* Silvestri, 1902 (gender: masculine), type species by monotypy *Scleropauropus hastifer* Silvestri, 1902;
- (3) to place on the Official List of Specific Names in Zoology the name *hastifer* Silvestri, 1902, as published in the binomen *Scleropauropus hastifer* (specific name of the type species of *Scleropauropus* Silvestri, 1902, as defined by the neotype designated in (1) above);
- (4) to place on the Official Index of Rejected and Invalid Names in Zoology the name *lyrifer* Remy, 1936, as published in the binomen *Scleropauropus lyrifer* (a junior objective synonym of *Scleropauropus hastifer* Silvestri, 1902, as defined by the neotype designated in (1) above).

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